

REMARKS

This Amendment to the patent application is made in response to an Office Action dated June 30 2003 in the file of this patent application. Reconsideration of the merits of this application, including the changes made herein, is respectfully requested.

First, enclosed is a substitute sequence listing in both paper and computer readable form, on a diskette. The sequence differs from that submitted previously in the addition of sequences designated SEQ ID:NO. 4 through 8, which incorporate into the sequence listing the DNA sequences on page 11 pointed out by the Examiner. The paper copy and the computer readable copy submitted herewith are identical.

The sequence identification numbers have also been added to Fig. 7 to cure that informality, as suggested by the Examiner.

It appears that the applicant has caused much confusion in this patent application by inconsistency in the designation of amino acid residues. Upon review, the numbering of these residues has never been consistent, in the application as filed, or in any of the amendments made so far. Throughout the prosecution, the applicant has failed to completely address all the inconsistency in these designations in the application as filed. It is hoped that this amendment addresses and cures all the inconsistencies.

First, the applicant wishes to state that these inconsistencies are not material to the enablement of this patent application. The inconsistencies all related to the numbering of amino acid residues and the numbering is, in each instance, at most off one residue. The inconsistency, as has been mentioned earlier, originally arose from an effort to follow the numbering of the prior art, the Lee paper. Even that effort was inconsistently applied, however, since at times the numbering was consistent with the sequence presented here. The applicant asserts that, given the state of the art in protein and nucleotide sequences, those of skill in the art are quite used to dealing with minor sequence errors. The errors here, although regrettable, would not have prevented someone of skill in this art from practicing the invention. The inventions were always explicitly directed to the replacement of adjacent cysteine residues, and one of skill in the art could recognize adjacent cysteine residues as such, whether those residues were labeled 94 and 95 or 95 and 96. While this inconsistency in numbering was regrettable, it does not make the application non-enabling.

Faced with inconsistent nomenclature in its own specification, the applicant was forced to make changes to the specification to use a common numbering scheme throughout. After considering between the choices of being consistent with the prior art (the Lee paper)

and being consistent with the sequence submitted herewith, the applicant has elected to strive for internal consistency and follow the numbering in the sequencing listing of this application. This has resulted in the need to make multiple changes to the specification, claims and drawings. The applicant believes that, in the context of this application, these changes are editorial changes, much like spelling changes, and do not represent new matter. The application was always directed to alterations to adjacent cysteine residues, and the numbering of the cysteine residues in the sequence listing remains unchanged. The applicant has simply been more methodical here in making the rest of the specification use the numbering of the applicant's own sequence listing.

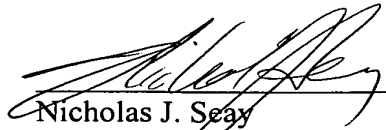
The amendments made to the claims above are simply to be consistent with the specification as amended.

Substitute drawing figures for Figs. 3 through 7 are submitted herewith as well. The changes to the drawings are to be consistent and consistent with the changes to the specifications. The sequence identifiers are also added to Fig. 7.

The other objections to the specification, insofar as they are understood by the applicant, are also addressed above.

Reconsideration of the merits of this patent application and its early allowance is respectfully requested.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Nicholas J. Seay", is written over a horizontal line.

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